TECHlink

GM

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2009 Cadillac CTS-V

For 2009, the Cadillac CTS-V offers a number of new and improved features, led by a supercharged V8 that offers 556 horsepower (415 kW) at 6,100 rpm. The vehicle's potential is emphasized by the domed aluminum hood and new front fascia with larger grill intakes for improved cooling.

Here are some highlights.

- 6.2L V8 ENGINE (LSA)
- 558 hp @ 6100 rpm
- 551 lb-ft @ 3800 rpm
- Supercharged (1.9 liter per revolution, 9 psi boost)
- Cast aluminum block
- Forged steel crankshaft
- 9.1:1 compression ratio
- Forged powder metal connecting rods
- Piston oil spray cooling

continued on page 2

2009 Pontiac G3

The 2009 Pontiac G3 is making its appearance in the spring of 2009. It's a five-door hatchback powered by a 1.6L Ecotec 4-cylinder engine with either a 5-speed manual or 4-speed automatic transmission.

Here are some highlights.

- 1.6L L-4 MFI DOHC ENGINE (LXV)
- 106 hp @6400 rpm
- 105 lb-ft @3800 rpm
- Cast iron block
- Cast nodular iron crankshaft
- 10.0:1 compression ratio
- Forged steel connecting rods
- Variable valve timing

continued on page 3

Techline News

Identifying Aftermarket Non-GM Calibrations

For more details, refer to bulletins 08-06-04-033 (Gasoline Engines) and 08-06-04-006A (Diesel Engines).

General Motors is identifying an increasing number of engine, transmission and catalytic converter part failures that are the result of non GM – aftermarket engine and transmission control calibrations being used.

When alteration to the GM released engine or transmission control calibrations occurs, it subjects powertrain and driveline components (engine, transmission, transfer case, driveshaft and rear axle) to stresses that were not tested by General Motors. It is because of these unknown stresses, and the potential to alter reliability, durability and emissions performance, that GM has adopted a policy to cancel any remaining warranty coverage to the powertrain and driveline components, whenever the presence of a non-GM/aftermarket calibration is confirmed – even if the non-GM control module calibration is subsequently removed.

continued on page 6

TECHlink GM

Contents

2009 Cadillac CTS-V 1
2009 Pontiac G3 1
Identifying Aftermarket Non-GM Calibrations 1
Center Cap Installation 4
Replacing Shock Absorbers in Pairs 4
Oil Life System Reset 4
Heated Washer Fluid – An Explanation 5
Applying RTV to Fuel Pump Control Module 5
Steering Calibration 5
Pontiac Vibe Programming Software 6
Auto HVAC Full Hot or Cold 6
Moan Noise 7
Transfer Case Seal 7
Slipping Clutch Conditions 7
TMAP Modification 7
Fix It Right the First Time 8
Know How Broadcasts for March 8

GM Service and Parts Operations

2009 Cadillac CTS-V – continued from page 1

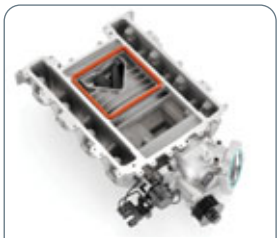
- Rotocast aluminum cylinder heads
- Cast aluminum intake manifold
- 2 valves per cylinder
- Hydraulic roller valve lifters
- Sequential fuel injection

6.2L V8 ENGINE (LSA)

Supercharger

The LSA V-8 is equipped with a sixth generation Eaton supercharger that features Twin Vortices Series (TVS) supercharging technology.The supercharger displaces 1.9 liters per revolution and generates a maximum boost pressure of 9.0 psi (0.52 bar).

The four lobe rotor design enhances quietness while also optimizing the performance and overall efficiency of the engine. Compared with earlier three lobe rotor designs, the amount of power needed to operate the supercharger is reduced by about 35%.

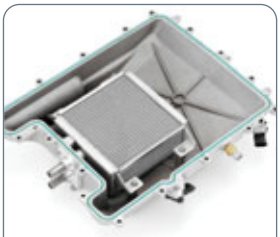


Supercharger with intercooler removed

Four-lobe rotor design

Intercooler

The LSA's intercooling system uses a single aluminum tube and fin heat exchanger mounted above the rotors in the supercharger case. Air pumped by the supercharger flows down to the intake ports on the cylinder heads. The intercooler cooled by its own coolant circuit, with a reservoir mounted in front of the radiator.



Intercooler, viewed from bottom side

LSA Oil System

The oil pump has a capacity of 33.8 gallons per minute, for efficiency during extended high-rpm operation. The six-quart oil pan is fitted with a liquid-to-air oil cooler.

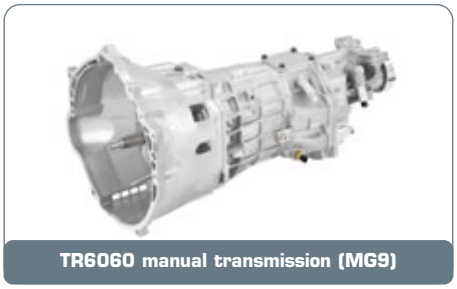
Engine oil cooler

TRANSMISSIONS

Two 6-speed transmissions are offered, both manual and automatic.

Manual Transmission

The new TR6060 manual transmission (MG9) is based on the proven Tremec T56 six-speed used in the previous CTS-V, but is upgraded to handle the LSA engine's increased torque output.



TR6060 manual transmission (MG9)

It features both double-cone and triple-cone synchronizers. A short-travel shifter mechanism is used. Bearings are used on the shift rail in place of bushings. This reduces friction, making the shifter feel lighter and more direct.

Twin Disc Clutch

A Luk 240 mm twin disc clutch uses a pair of smaller diameter clutch discs that have less inertia than a single, larger diameter disc. This delivers improved clamping power and excellent shift effort. A dual mass flywheel is used for smooth, rattle free performance.

Automatic Transmission

The Hydra-Matic 6L90 six-speed is the first automatic transmission offered in the CTS-V.

The transmission is a heavy-duty version of the 6L80 six-speed automatic. A strengthened input gearset has two additional pinion gears (total of six). And a strengthened output gearset uses wider gears than the 6L80.

A twin-plate torque converter clutch accommodates the torque output of the LSA engine. This is the first twin-plate configuration used with GM's 300-mm torque converter. Like the dual-disc clutch of the six-speed manual transmission, the twin-plate converter clutch provides additional clamping power.

Hydra-Matic 6L90 transmission

Tap-Up/Tap-Down Shift Controls

Standard steering-wheel-mounted paddles are provided for tap-up/tap-down shift control. There is also a console-mounted gear shifter control.

DRIVELINE

The driveline is mounted on a large steel subframe that provides isolation from the rest of the chassis. The rear axle and differential assembly of the CTS-V are upgraded to handle the additional torque. The GT4 axle ratio is 3.73:1 with the manual and 3.23:1 with the automatic. The driveshaft has a larger outside diameter and thicker wall, the limited-slip differential housing is made of cast iron and has offset mounts.

Rear suspension subframe

TIP: Two different size half shafts are used to counteract axle hop. The left side is 55 mm, and the right side is 35 mm.

A Rear Differential Cooler kit is available through Service Parts (*TechLink* October 2008).

TIRES AND WHEELS

Michelin PilotSport 2 tires (255/40R-19 front and 285/35R-19 rear) on 19-inch alloy wheels were developed specifically for the CTS-V.

continued on page 3

MAGNETIC RIDE CONTROL (MRC)

Magnetic Ride Control (MRC), also known in SI as magneto-rheological real time damping (MRRTD), independently controls the fluid viscosity in each of the four shock absorbers during hard cornering, acceleration, braking and other dynamic maneuvers.

The driver can select one of two Magnetic Ride modes: Tour for grand touring or Sport for performance driving. Both modes use the same algorithms but have different calibrations.

A new type of magnetic fluid and a new piston shape inside the shock allow the Touring setting to be even softer, and the Sport setting even firmer.

The CTS-V also has a lower ride height than the CTS.

BRAKES

The J56 heavy-duty antilock brake system uses Brembo 14.6-in. six-piston brakes in front and 14.4-in. four-piston brakes in the rear.

A J63 competition brake package uses race-style front rotors that are bolted together, unlike the regular CTS-V front rotors which are cast 2-piece rotors. The competition package also includes red-painted Brembo brake calipers.

Electric Parking Brake

An electric parking brake is standard on the 2009 Cadillac CTS-V. An electric park brake (EPB) release switch replaces the park brake pedal and release handle used on the manual system.

The electric park brake module assembly has an internal motor, apply actuator, release actuator, and temperature sensor. The control module also contains the logic for applying and releasing the parking brake when commanded by the parking brake switch.

See the July 2008 issue of *TechLink* for greater detail.

INTERIOR FEATURES

The instrument panel has a boost gauge, lateral G meter and added tracers on the tachometer and speedometer.

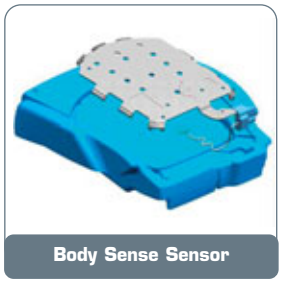
The seat inserts are covered in a suede-like microfiber cover. Metallic throttle, brake and clutch pedals are also available with the microfiber package.

Performance Driving Seats

Optional performance driving seats provide excellent support for spirited driving. These new, 14-way adjustable performance seats include suede seat inserts and pneumatic bolster controls in the seat cushion and backrest.

A microfiber covered steering wheel and shifter are optional with the performance seat package.

Passenger Presence System



Body Sense Sensor

Starting with the 2009 model year the CTS-V (and CTS as well) is equipped with a Body Sense PPS system.

This system uses input from a flexible sensor that emits a low level electric field to discriminate between an infant in a child restraint and an occupant sitting directly on the seat. The Body Sense PPS system will enable (turn ON) the passenger frontal airbag for a wider range of front seat occupants than the system it replaces.

TIP: Customers should be aware that some electronic devices placed on the front passenger seat (computers, MP3 players, cell phones, etc.) may interfere with the electric field generated by the system, causing it to enable (turn ON) the passenger airbag and turn on the safety belt reminder light and chime, even though the seat is not occupied. Theelectronic device does not necessarily need to be turned on to cause this condition. If this happens, have the customer remove the electronic device from the seat.

– *Thanks to Toby Davis*

2009 Pontiac G3 – continued from page 1

- Cast aluminum cylinder head
- DOHC
- 4 valves per cylinder
- Mechanical tappets
- Sequential fuel injectors

Ecotec 1.6L I-4 (LXV) engine

The standard engine for the G3 is the Ecotec 1.6L I-4 VVT (LXV).

The cylinder block incorporates the hollow-frame design, reducing the weight by 17% while maintaining optimized stiffness in the engine-and-transmission unit.

The crankshaft has a new anisotropic magneto-resistive sensor (AMR) in a plastic carrier pressed into the cylinder block. The magnetized sensor disk for the AMR is located between the crankshaft and flywheel.

Camshaft phasing optimizes valve timing over a wide range of engine operating conditions to improve power and low end torque output.

The operating efficiency of the 1.6L Ecotec uses a two step intake manifold. A rotary sleeve controls the flow of air through the intake manifold and is designed to minimize airflow resistance in the manifold at high speeds.

TRANSMISSIONS

Manual Transmission

The D16 manual 5-speed transmission (MLM/MM5) is a two-shaft, transverse design in a one-piece aluminum die cast housing. It uses a rod-type shifting system. The final drive ratio is 3.94.

The MLM/MM5 uses a ceramic hydraulic clutch plate. Shift quality is enhanced by a shift precision device (detent pin), and shift effort is reduced by changing the angle of the 1st/2nd gear synchronizer.

The G3 has a manual transmission shift indicator displayed in the instrument panel as a standard feature (except Canada).

Automatic Transmission

The Aisin automatic 4-speed transmission (MLQ/MX0) is an electronically controlled transaxle, with a torque converter clutch in an aluminum die cast housing. The final drive ratio is 3.84.

Reinforcements to the shaft, gear housing, freewheel, and other areas allow the MLQ/MX0 to handle a maximum engine torque of 150 Nm. The 3rd to 4th shift is clutch-to-clutch, while all other shifts are one-way clutches.

The TCM includes a cruise up-hill shift pattern and improvements to the economic and up-hill shift pattern. The CAN diagnostic protocols meet OBD II regulations.

continued on page 4

2009 Pontiac G3 – continued from page 3

TIRES AND WHEELS

The standard tire is the 14-inch all-season blackwall P185/60R14 mounted to a steel wheel with full bolt-on wheel cover.

A 15-inch all-season blackwall P185/55R15 mounted to a 5-spoke painted aluminum wheel is included with the Sport Package (PDX).

A tire pressure monitoring system is a standard feature of the G3 (except Canada). If the system detects low pressure in the tire, it will turn ON the tire pressure warning light in the DIC to alert the driver.

BRAKES

The front disc/ rear drum brake system incorporates a 254 mm brake booster and ventilated front disc brakes.

A 4-wheel antilock brake system is available for models with the 4-speed automatic transmission.

The ABS uses sensors in each wheel to balance brake force distribution based on the weight of the passengers and cargo, as well as the road conditions. It also includes an engine immobilizer as part of the theft-deterrent system.

INTERIOR FEATURES

A tilt steering column is standard equipment. A 4-spoke leatherette wrapped steering wheel is included with Sport Package.

The oil life monitoring system is standard and the display is in the instrument panel cluster.

The electronic automatic cruise control has Set and Resume speed features and is included with the Cruisin' Package. Cruise control is also available as a stand alone option.

An electrical accessory receptacle is suited to common consumer electronics.

Variable delay windshield wipers wipers and a rear defogger with a timer are standard.

Manual windows are standard, but power windows with rear passenger lockout are included with the Preferred Package.

Power door locks are included with the Preferred Package.

Remote keyless entry with a panic button is part of the theft-deterrent system included and available with the Preferred Package. The engine immobilizer is part of the theft-deterrent system and is available with 4-wheel ABS.

OnStar is a standard feature.

Seats

The charcoal interior includes manually adjusted (fore/aft and recline) cloth front bucket seats and height-adjustable headrests with accessory hooks as standard equipment.

Perforated leatherette seats are available with the Sport Package and the Preferred Package with the 4-speed automatic transmission.

– *Thanks to Jerry Parsell*

Center Cap Installation

Typical center caps

Broken retaining tabs

The owner of a 2008-09 fullsize pickup or utility equipped with aluminum factory wheels may experience loose, missing, or noisy center caps.

This may be due to an improperly installed center cap. Check for proper installation of the center cap. It is possible to install the center cap in several ways, but there is only one correct way to achieve a tight fit. Incorrect installation may result in broken retaining tabs.

When installing the center cap, the valve stem icon on the backside of the cap should point toward the valve stem of the wheel. With the icon aligned properly, use the heel of the hand to seat the cap into place.

Valve stem icon

– *Thanks to Steve Love*

Replacing Shock Absorbers in Pairs

This information applies to all truck suspensions. Refer to bulletin 05-03-08-002B for additional details.

When replacing a shock absorber, it is not necessary to replace in pairs.

Unless otherwise instructed, replace only the damaged component. Do not replace the other shock absorber in the pair if it is still serviceable.

– *Thanks to Steve Love*

Oil Life System Reset

On a 2008-09 HHR SS with engine RPO LNF, the engine oil life (EOL) may not reset.

Engineering has determined that the ECM for the 2008-09 HHR SS does not support the use of the accelerator pedal for the Engine Oil Life System reset procedure. This is listed incorrectly in SI and the Owner Manuals of this vehicle, and is in the process of being changed.

Use the DIC procedure or Tech 2 to perform the EOL reset.

– *Thanks to Jeff Gorenflo*

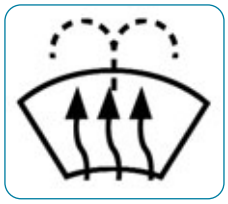
Heated Washer Fluid – An Explanation

A heated washer fluid feature is available on a number of 2008 and earlier vehicles. To avoid unnecessary repair and replacement of components, it's important to understand how the system is designed to operate.

The heated fluid feature is controlled by a unique button with a washer icon, not the conventional windshield washer button. The location varies, depending on model. It may be located on the instrument panel or on the multifunction lever.

Typical heated washer fluid control

To use the heated fluid feature, depress the control button, then release. The system will then perform four heated wash/wipe cycles, then shut off. If the heated fluid button is depressed a second time before the wash/wipe cycle is completed, the system is turned off.



TIP: The first wash/wipe cycle may take up to 40 seconds to occur, depending on outside temperature. Subsequent wash/wipe cycles may take up to 20 seconds to occur.

If the wash/wipe cycle does not start immediately, some owners may depress the button a second time in an attempt to prod the system to work. This will actually do the opposite. It will turn the system off, which may be misinterpreted as a malfunction.

Before attempting any repairs or replacing any components, be sure the customer understands proper operation and waits for the necessary warmup to occur.

– *Thanks to Steve Love*

Applying RTV to Fuel Pump Control Module

This information applies to 2009 vehicles equipped with a gasoline engine and Fuel Pump Control Module (FPCM).

On rare occasions, a customer may experience one or all of the following concerns:

1. Intermittent crank no start condition
2. Extended crank
3. Vehicle stall condition
4. One or all of the following codes:
   - P069E, P0230 or U0109 set in the PCM
   - P0606 set in the Fuel Pump Control Module (FPCM)

These symptoms may be the result of water intrusion into the Fuel Pump Flow Control Module due to a disruption in the case seal.

Check the Fuel Pump Control Module (FPCM) for fuel control-specific DTCs (if communication is possible) before inspecting connections. Then refer to SI for those fuel control DTCs. If module replacement is required, replace the FPCM by following the Fuel Pump Flow Control Module replacement procedure in SI and using the special procedure below. Also clean or repair the related connector if necessary.

Before installing the new module, please follow instructions below to prevent the vehicle from returning.

1. Clean the backside surface by wiping or brushing to remove all dirt, grease, water, etc. Surface must be clean and dry.
2. Use GM approved RTV sealant p/n 12378521. (Canada p/n: 88901148).

3. Apply sealant to the joint between the aluminum back plate and the plastic housing.
4. Insure that the sealant fills the gap in the joint. Work the sealant into the joint using an index finger. Leave at least a 4mm wide bead on the surface.

TIP: Review the RTV manufacturer's MSDS before use. Wear chemical resistant gloves. Avoid contact of RTV with eyes, skin and clothing. Avoid breathing vapor and mist. Wash thoroughly after handling. Do not wear contact lenses.

5. Allow the sealant to cure at room temperature until it is firm and rubber like. This will usually take a full 24 hours to cure.
6. Install FSCM on vehicle.

– *Thanks to Saundra Massingille*

Steering Calibration

This information applies to the 2008 Tahoe and Yukon Hybrid with RPO HP2.

Currently, the Tech 2 has a software anomaly with the power steering calibration procedure. When you start the procedure, the Tech 2 will have you rotate the steering wheel 90 degrees to the right and then another 90 degrees to the left before centering the steering wheel. After you perform this step and press the continue button at the bottom of the screen, you will experience a no-communication screen.

Currently engineering is working on new software for the Tech 2 to resolve this concern. Follow the temporary work-around to perform the power steering calibration.

As soon as you reach the screen that advises you to rotate the steering wheel left and then right 90 degrees, immediately move the steering wheel. There is only a 2 second window to start the test or the Tech 2 will time out and display a "no communications" screen when you press the continue button. Once you make it past this screen, the rest of the test can be completed successfully.

TIP: If you wait longer than 2 seconds (for example, the 10 seconds it takes to read the instruction screen) the test will time out.

Addition Information:

The last screen will display the Manufacture Enable Counter reset screen. This should be needed only if the current counter displayed on the screen reads something other than zero.

When performing the Power Steering Calibration, it is normal for the Driver Information Center (DIC) to read "Service Power Steering System."

– *Thanks to Paul Radzwilowicz*

Techline News – continued from page 1

Warranty coverage is based on the equipment and calibrations that were released on the vehicle at time of sale, or subsequently updated by GM. That's because GM testing and validation matches the calibration to a host of criteria that are essential to assure reliability, durability and emissions performance over the life of the warranty coverage and beyond. Stresses resulting from calibrations different than those tested and released by GM can damage or weaken components, leading to poor performance and or shortened life.

Additionally; non-GM-issued aftermarket engine control modifications often do not meet the same emissions performance standards as GM-issued calibrations. Depending on state statutes, individuals who install engine control module calibrations that put the vehicle outside the parameters of emissions certification standards may be subject to fines and/or penalties.

GM service bulletins 08-06-04-033 and 08-06-04-006 outline procedures to identify the presence of non-GM/aftermarket calibrations. GM recommends performing this check whenever a hard part failure is seen on internal engine or transmission components, or before an engine assembly or transmission assembly is being replaced under warranty. It is also recommended that the engine calibration verification procedure be performed whenever diagnostics indicate that catalytic converter replacement is indicated.

In February 2009, PQC will begin piloting a process to confirm the ECM calibration is GM-issued. Beginning in February, PQC will require a picture of the engine calibration verification screen, as outlined in the bulletin, before authorizing any V8 engine replacement (both Gas and Diesel).

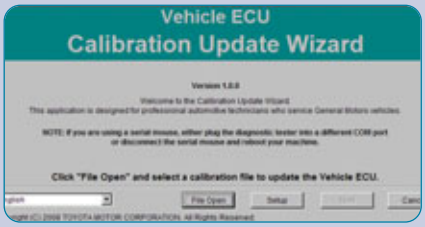
If a non-GM calibration is detected by the dealership, follow the procedures outlined in the bulletin. Once documentation of the non-GM calibration has been received, and verification has taken place through GM, the remaining powertrain and driveline warranty will be cancelled and noted in VISS, and the dealership will receive the following notification:

Based on information that has been received, please inform the customer that the Powertrain portion of the New Vehicle Warranty is no longer in effect for the engine, transmission, driveline and rear axle on VIN XXXXXXXXXXXXXXXX, due to the presence of non-GM calibrations and/or equipment. The stresses resulting from the non-GM calibrations and/or equipment were not validated by GM and therefore cannot be warranted on any components that are subject to those stresses. Repairs to powertrain or driveline components that may currently require repair should not be covered under the terms of the new vehicle warranty. The warranty group has been advised of this information and VISS will be updated accordingly.

– *Thanks to Jay Dankovich*

Pontiac Vibe Programming Software

One of the unique things about the Pontiac Vibe is that in the past, its control modules have not be service programmable. This has resulted in extended service downtimes for customer vehicles as dealers wait for replacement modules. To improve this customer experience, GMSO is releasing Vibe programming software and calibrations that will allow Pontiac dealers to perform calibration updates for limited control modules, rather than performing repairs with pre-programmed replacement modules.



While not supported in Service Programming Systems (SPS), Pontiac Vibe programming software and related calibrations will be available for download from the TIS 2 Web application.

This separate application will require detailed download and setup procedures that may require the assistance of your dealer's system administrator. A service bulletin will be released shortly, covering the necessary steps to successfully complete the setup.

Highlights:

- Pontiac Vibe software to be released mid January
- Software and calibrations will be links under TIS 2 Web 'Help'
- Vibe programming software will be separate from SPS
- Can be used with MDI or Tech 2
- Initially limited to PCM programming
- Easy to use once software is installed

Techline Customer Support Center (TCSC) and Regional Techline Consultants (TC) can assist with setup.

– *Thanks to Mike Waszczenko*

Auto HVAC Full Hot or Cold

This information applies to 2008 Enclave and H2, 2007-08 Escalade, Avalanche, Silverado, Suburban, Tahoe, Acadia, Sierra, Yukon, and OUTLOOK with RPO CJ2.

The auto HVAC system may default to full hot or full cold. There may be any of the following HVAC DTCs: B0423, B0228, B3779, B0413, B3782, or B0433. This condition may correct itself if the ignition key is cycled. This condition may be caused by an HVAC system calibration issue.

Reprogram the HVAC Control Module with the latest calibrations available from TIS2WEB. Be sure your Tech 2 is updated with the latest software version. After programming, turn the ignition key off, open and close the driver door to turn off RAP and wait one minute. Cycle the ignition key on and clear DTCs. If any DTCs return, perform normal diagnostics using SI procedures.

– *Thanks to Jim Will*

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Moan Noise

In rare occurrences, the owner of a 2007-09 Aveo, G3 or Wave (Canada) equipped with a 5 speed manual transmission may comment of a resonation or moan noise that is heard and or felt while driving at 55-60 mph (89-97 kph). The condition is most noticeable on smooth, level roads with a light load. Engineering is currently working to identify the root cause and develop a correction for this condition.

Repairs in the field have been unsuccessful in correcting this condition. Until a root cause and viable correction have been identified, repairs should not be attempted. Advise the customer that this condition should be considered a normal vehicle characteristic and can be compared to a like vehicle.

– *Thanks to Jeff Gorenflo*

Transfer Case Seal

Typical transfer case input shaft seal condition

On a 2009 Escalade, 2008-09 Avalanche, Silverado, Suburban, Tahoe, Sierra, or Yukon equipped with Magna transfer case RPO NQF, NQH or NQG, a customer may comment on transmission slipping or surging, transmission fluid low or a leak out of the transmission vent. The transfer case may be overfull.

These concerns may be caused by the transfer case input seal allowing fluid to migrate out of the transmission into the transfer case. If the vehicle has transmission concerns such as slipping or surging and this is a repeat transmission concern, or there is a fluid leak from the shared vent, inspect and if necessary replace the transfer case input shaft seal.

– *Thanks to Chuck Krepp*

Slipping Clutch Conditions

In rare instances, some owners of a 2004–09 GM passenger car or light duty truck equipped with gasoline engine and manual transmission may comment that the Service Engine Soon (SES) light has illuminated. Upon closer inspection using a Tech 2, DTC P0502 (vehicle speed sensor circuit low voltage) may be found stored in the PCM.

Follow the appropriate diagnostic information in SI. If no cause for the DTC can be found, the condition may be customer induced. Supporting data may be found in the freeze frame info stored with the DTC.

For help in diagnosing the vehicle, review Tech 2 data parameters: Calculated Engine Load, Engine Speed, Output Shaft Speed Sensor and Clutch Pedal Position.

Inform the customer that excessive slipping of the clutch with the vehicle stationary or moving at low speeds may cause this DTC to set. This is considered normal vehicle operation. Engineering is currently investigating the concern and updated information will be released when it is available.

– *Thanks to Jeff Gorenflo*

TMAP Modification

TMAP before modification

When installing the Performance Parts accessory upgrade Stage I Turbo kit on a 2008-09 HHR SS, the intake air pressure temperature (TMAP) sensor interferes with the charge air cooler (CAC) pipe .

The sensor requires modification before assembly, or leaks may occur. Engineering is currently reviewing this concern and a service procedure has been developed until the parts can be updated. Following these steps will prevent any concerns when mounting the TMAP to the CAC pipe.

TMAP with boss removed

The boss must be removed to prevent interference with the alignment tab on the CAC pipe. Carefully clearance the boss until the TMAP will mount flush.

– *Thanks to Jeff Gorenflo*

Car Issues – Fix It Right the First Time

Model Year(s)	Vehicle Line(s) / Condition	Do This	Don't Do This	Reference Information / Bulletin
2007-08	SRX – Upper storage compartment will not open	Push plastic retaining finger and move pendulum forward	Don't replace upper I/P storage compartment	08-08-49-007
2006-08	Impala – Key cannot be removed in Park, shifter cannot be moved	Repair wiring damage and reroute wiring	Don't replace shifter	08-07-30-007A
2008	Lucerne – Front edge of headliner frayed	Install protector with longer adhesive side facing down	Don't install complete headliner	07-08-110-006B
2006-08	All vehicles with TPM – Transfer sensors to replacement wheels	Move TPM sensor to new wheel	Don't install new TPM sensor	08-03-16-003
2006-08	Vehicles with aluminum wheels – Tire leaking air	Repair wheel and paint	Don't replace wheel	08-03-10-006
2007-09	DTS – Doors may not open although unlocked	Adjust front and rear inner door latch rods	Don't replace door handle or latch	08-08-64-015
2007-08	2.8L, 3.6L (VIN T, 7, V) – SES light with DTCs	Install camshaft thrust washer	Don't replace cylinder head	08-06-01-011A
2006-09	G6 – Convertible top inoperative, hinges broken, flipper door cables broken, brackets bent	Perform repair and adjust tonneau and flippers per SI	Don't fail to perform critical steps 1-11	AIC3517
2007-08	Impala – SES, fuel gauge erratic	Inspect connectors and terminals	Don't replace pump or level sensor	PIC4878C
2006-09	MW7 auto transmission – Transmission cooler lines leak at crimp	Install new line	Don't use old design lines	—

Truck Issues – Fix It Right the First Time

Model Year(s)	Vehicle Line(s) / Condition	Do This	Don't Do This	Reference Information / Bulletin
2007-08	Fullsize utilities with 5.3L E85 Engine (RPO LC9 or LMG) – Intermittent extended crank after hot soak	Replace single dripping injector, or all if more than one drips	Don't clean injectors	PIP4450C
2009	Enclave, Traverse, Acadia, OUTLOOK with Navigation Radio and RPA – Intermittent battery draw	Reprogram radio with latest calibrations in TIS	Don't replace battery, radio, BCM or other modules	PIP4450C
2001-04	LB7 Duramax Diesel – Injector high pressure lines corroded	Clean connection area of line and nut of injector high pressure lines as required	Don't replace lines	03-06-04-036A
2007-08	Fullsize utilities --1500 Series – Power steering fluid leak	Determine source of leak	Don't replace power steering rack	07-02-32-002B
2007-08	Fullsize utilities – Remote mirror inoperative	Perform wiring checks	Don't replace mirror assembly	08-08-45-002
2007-08	Fullsize utilities and trucks, H2 – Clock, clock tab on navigation screen not appearing	Reprogram with 08i software disc	Don't replace radio assembly	08-08-44-002
2004-07	Colorado, Canyon, H3 – Reduced power, P codes	Check battery state of charge and charge or replace as necessary	Don't replace throttle body, throttle body module, accelerator pedal, accelerator position sensor, PCM, or ignition switch	08-06-04-014
2008	Sierra, Silverado – SES P1174	Reprogram ECM using TIS2Web	Don't replace catalytic converter, PCM, injectors, fuel rails, fuel pumps	08-06-04-028
2006-09	All vehicles – Identifying aftermarket engine calibrations	Block the warranty claim if aftermarket calibration is installed	Don't submit warranty claim if aftermarket calibration is installed	08-06-04-033 - Gas 08-06-04-006B - Diesel
2008-09	GMC Sierra, Yukon, Chevrolet Silverado, Tahoe, Hummer H2, H3, Cadillac Escalade Gen IV V8 Engines – Accessory Drive Belt Noise	Replace belt	Don't replace pulley or component	08-06-01-008

Know-How Broadcasts for March

10209.03D Emerging Issues	March 12, 2009	9:30 AM and 12:30 PM Eastern Time
New Model Features	For Web NMF courses, log on to the GM Training Website (www.gmtraining.com). Select Service Know-How/TechAssists from the menu, then choose New Model Features for a selection of courses.	

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